Soil Indicators

Wetland soils, called hydric soils, have characteristics that indicate they were developed in conditions where oxygen in the soil is limited by the presence of water in soil (saturation) for long periods of time during the growing season. In these situations, the wetland soil becomes so saturated with water that it cannot hold much, if any, oxygen. The prolonged presence of water, and the lack of oxygen, cause chemical changes that affect the color of the soil. By observing color characteristics of a soil sample, soil scientists can determine if it is a hydric soil and how long or how frequently an area has been wet. An examination of the soil can determine the presence of any hydric soil indicators, including:

- Soil consists predominantly of decomposed plant material (peats or mucks).
- Soil has a thick layer of decomposing plant material on the surface.
- Soil has a bluish gray or gray color below the surface, or the major color of the soil at this depth is dark (brownish black or black) and dull.
- Soil has the odor of rotten eggs.
- Soil is sandy and has a layer of decomposing plant material at the soil surface.
- Soil is sandy and has dark stains or dark streaks of organic material in the upper layer below the soil surface. These streaks are decomposed plant material attached to the soil particles. When soil from these streaks is rubbed between the fingers, a dark stain is left on the fingers.

If the soil in your area is listed as hydric by the U.S. Natural Resources Conservation Service (NRCS), the area might be a wetland. To find out more about hydric soils in Washington State, go to our Soil Resources page.

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